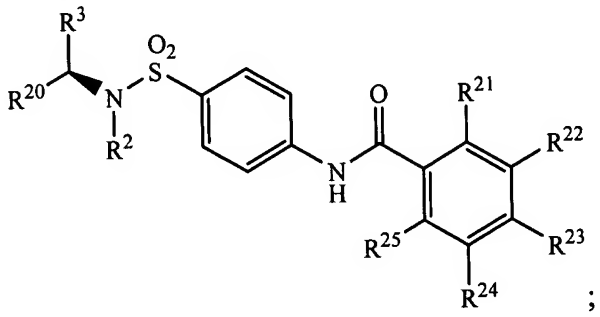
Claims

1. **(previously amended)** A compound; an enantiomer, diastereomer, racemate, or tautomer of the compound; or a salt of the compound, enantiomer, diastereomer, racemate, or tautomer, wherein:

the compound has the following structure:



;

R^2 is morpholinylalkyl;

R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxy, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, haloalkoxy, and haloalkylthio;

R^{20} is selected from the group consisting of -C(O)OH, -SH, and -C(O)SH; and

R^{21}, R^{22}, R^{23}, R^{24}, and R^{25} are independently selected from the group consisting of H, C_1 to about C_{20} alkyl, C_1 to about C_{20} alkenyl, C_1 to about C_{20} alkynyl, cycloalkyl, haloalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, nitroalkyl, alkoxy, cycloalkoxy, alkoxycarbonyl, alkoxyalkyl, haloalkoxy, haloalkylthio, alkylamino, and carboxyalkyl.

2. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 1 wherein R^{20} is -C(O)OH.

3. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 2 wherein R^{21} and R^{25} are H.

4. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 3 wherein R^{22} and R^{24} are H.

5. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 4 wherein R^{23} is C_1 to about C_{20} alkyl.

6. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 5 wherein R^{23} is C_1 to about C_{20} linear alkyl.

Claim 7 (canceled).

8. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 2 wherein R^3 is selected from the group consisting of alkyl, alkenyl, alkynyl, haloalkoxy, and haloalkylthio.

Claim 9 (canceled).

10. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 8 wherein R^2 is 2-(N-morpholino)ethyl.

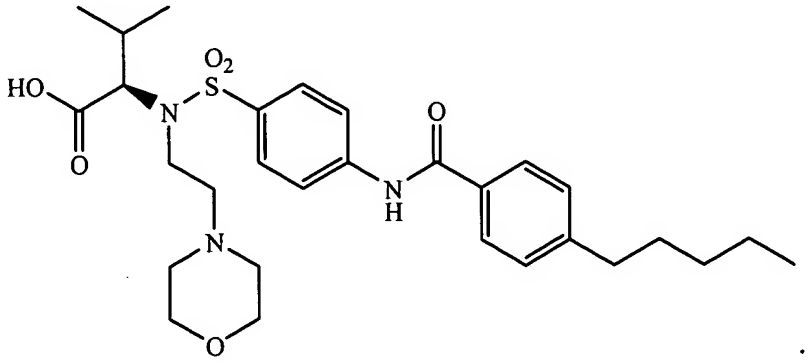
Claim 11 (canceled).

12. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 6 wherein R^3 is selected from the group consisting of alkyl, alkenyl, alkynyl, haloalkoxy, and haloalkylthio.

Claim 13 (canceled).

14. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 6 wherein R^2 is 2-(N-morpholino)ethyl.

15. **(previously amended)** The compound, enantiomer, diastereomer, racemate, tautomer, or salt of claim 10 wherein the compound has the following structure:

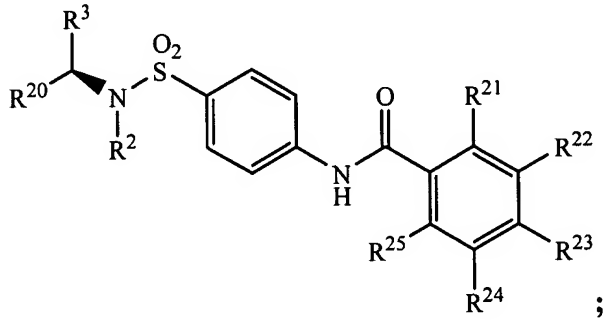


Claims 16-38 (canceled).

39. **(previously amended)** A method of inhibiting a matrix metalloproteinase, wherein:

the method comprises contacting the matrix metalloproteinase with a compound; an enantiomer, diastereomer, racemate, or tautomer of the compound; or a salt of the compound, enantiomer, diastereomer, racemate, or tautomer;

the compound has the following formula:



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R^2 is morpholinylalkyl;

R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxy, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, haloalkoxy, and haloalkylthio;

R^{20} is selected from the group consisting of -C(O)OH, -SH, and -C(O)SH; and

R^{21}, R^{22}, R^{23}, R^{24}, and R^{25} are independently selected from the group consisting of H, C_1 to about C_{20} alkyl, C_1 to about C_{20} alkenyl, C_1 to about C_{20} alkynyl, cycloalkyl, haloalkyl,

alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, nitroalkyl, alkoxy, cycloalkoxy, alkoxycarbonyl, alkoxyalkyl, haloalkoxy, haloalkylthio, alkylamino, and carboxyalkyl.

40. **(previously amended)** The method of claim 39 wherein R^{20} is -C(O)OH.

41. **(previously amended)** The method of claim 39 wherein R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, haloalkoxy, and haloalkylthio.

42. **(original)** The method of claim 41 wherein R^3 is a C_1 to about C_{12} alkyl.

43. **(original)** The method of claim 42 wherein R^3 is a C_1 to about C_4 alkyl.

44. **(original)** The method of claim 43 wherein R^3 is isopropyl.

Claim 45 (canceled).

46. **(previously amended)** The method of claim 39 wherein R^2 is 2-(N-morpholino)ethyl.

47. **(original)** The method of claim 39 wherein R^{21} and R^{25} are H.

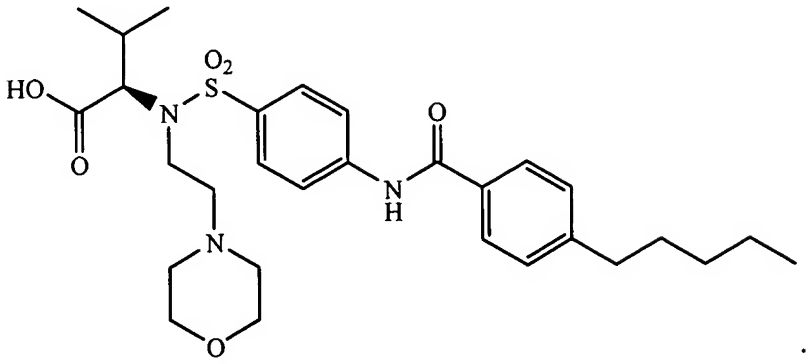
48. **(original)** The method of claim 47 wherein R^{22} and R^{24} are H.

49. **(original)** The method of claim 48 wherein R^{23} is C_1 to about C_{20} alkyl.

50. **(original)** The method of claim 49 wherein R^{23} is methyl or C_2 to about C_{20} linear alkyl.

51. **(original)** The method of claim 50 wherein R^{23} is n-pentyl or n-hexyl.

52. **(previously amended)** The method of claim 51 wherein the compound has the following structure:



Claims 53-56 (canceled).

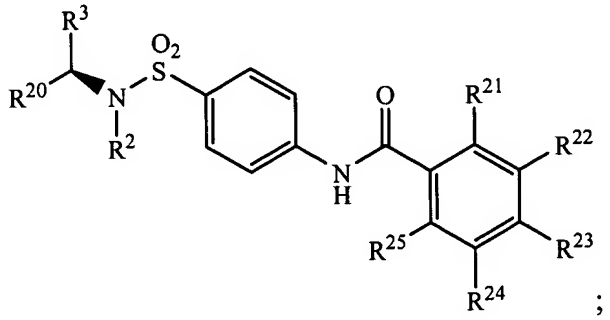
57. **(previously amended)** The method of claim 39 wherein the matrix metalloproteinase is MMP-8.

58. **(previously amended)** The method of claim 39 wherein the matrix metalloproteinase is MMP-13.

59. **(previously amended)** A method treating osteoarthritis in a mammal, wherein:

the method comprises providing to the mammal an osteoarthritis-treating-effective amount of a compound; an enantiomer, diastereomer, racemate, or tautomer of the compound; or a salt of the compound, enantiomer, diastereomer, racemate, or tautomer;

the compound has the following formula:



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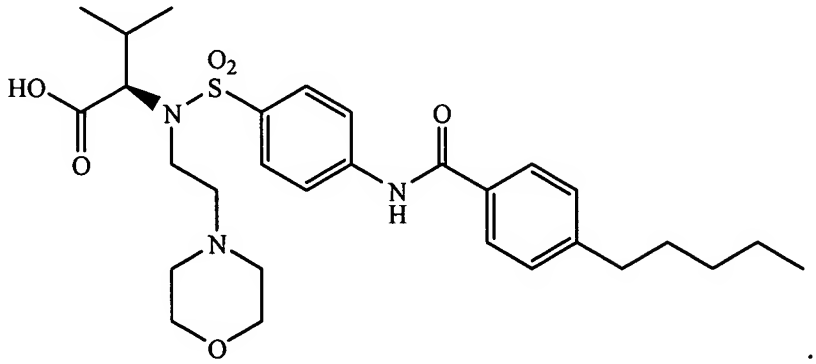
R^3 is selected from the group consisting of H, alkyl, alkenyl, alkynyl, cycloalkyl, haloalkyl, alkylaryl, arylalkyl, alkoxy, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, haloalkoxy, and haloalkylthio;

R^{20} is selected from the group consisting of -C(O)OH, -SH, and -C(O)SH; and

R^{21}, R^{22}, R^{23}, R^{24}, and R^{25} are independently selected from the group consisting of H, C_1 to about C_{20} alkyl, C_1 to about C_{20} alkenyl, C_1 to about C_{20} alkynyl, cycloalkyl, haloalkyl, alkoxyalkyl, hydroxyalkyl, aminoalkyl, alkylaminoalkyl, nitroalkyl, alkoxy, cycloalkoxy, alkoxycarbonyl, alkoxyalkyl, haloalkoxy, haloalkylthio, alkylamino, and carboxyalkyl.

60. **(original)** The method of claim 59 wherein the mammal is a human.

61. **(previously amended)** The method of claim 60 wherein the compound has the following structure:



Claims 62-64 (canceled).